

BENCHMARKS

VOLUME 6

NUMBER 10

NORTH TEXAS STATE UNIVERSITY

NOVEMBER 1985

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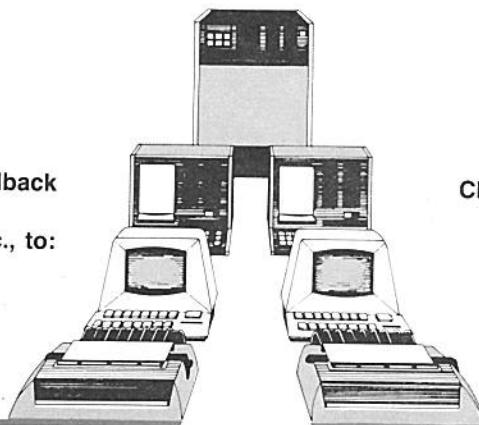
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BENCHMARKS Reader/User feedback is encouraged.

Send all letters, suggestions, etc., to:
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Manager,
Academic Computing Services

SERVICES AVAILABLE TO USERS OF THE NTSU COMPUTING FACILITIES

The NTSU Computing Center is located in the Information Sciences Bldg., Room 119. Telephone: (817) 565-2324. HELP DESK phone: 565-4050.

BENCHMARKS QUESTIONS/CONTRIBUTIONS, ETC.
- Claudia Lynch

INFORMATION & ID CODES; DISK SPACE PROBLEMS - Carolyn Goodman

PRE-RESEARCH COUNSELING; STATISTICAL/RESEARCH SUPPORT - George Morrow, Scott Barber, Claudia Lynch, Tim King, Panu Sittiwong

STUDENT PROGRAMMING PROBLEMS - CSCI Dept., GAB Room 542A; BCIS Dept., BA Room 152

JCL PROBLEMS; PASSWORD & OPERATING SYSTEM PROBLEMS; COMMUNICATION/TERMINAL PROBLEMS - Help Desk

DATA ENTRY & KEYPUNCH; TEST SCORING & ANALYSIS - Betty Grise

ADMINISTRATIVE APPLICATIONS - Coy Hoggard

PRINTOUT RETRIEVAL - RJE Operators

DIALING UP NTSU COMPUTERS OVER THE TELEPHONE

Phone numbers for the Local Area Network (LAN) are:

300 BAUD: (817) 565 - 3300
1200 BAUD: 565 - 3499
300 BAUD:D/FW METRO 429 - 6006

After a communications link has been successfully established, the user will receive the # prompt. At this point, it will be necessary to issue the appropriate CALL command to connect with a computer.

The modems that will accept either 300 or 1200 baud communications (connected to modems with an autobaud feature) are currently out of order. Watch MUSIC/VAX News and *Benchmarks* for information concerning their availability.

CALL 8040 will connect with the
8050 NAS/8043 (for MUSIC access)
8060

CALL 3270 will connect with the
3280 NAS/8043 through the 3270 protocol converter

CALL A780 will connect with VAX-A
CALL B780 will connect with VAX-B

CALL 2000 will connect with the HP-2000

NTSU CABLE SYSTEM SCHEDULE

The current configuration of the NTSU cable system is as follows:

Channel 8 — Tager microwave channel. Carries broadcasts to and from NTSU to other links in the Tager network.

Channel 10 — NTSU Computer System Status Monitor (SSM). Displays the current status of the NAS, VAX and HP computer systems supported by the Computing Center.

Channel 9 — NT Daily. Broadcast originates from the NTSU Journalism Department.

Channel 12 — Sammons Cable. Currently broadcasts Cable News Network (CNN), unless a special program is requested.

Special broadcasts to and from classrooms, etcetera can be arranged by contacting the Media Library (565-2484).

HOURS FOR NTSU COMPUTER ACCESS AREAS**FALL SEMESTER*:**

<u>Days</u>	<u>Times</u>	<u>Location</u>
Sunday	2-10 p.m. Noon-Midnight 2-11 p.m.	ISB 110 Terminal Area Computing Center RJE GAB 550C
Saturday, Sunday	Noon-11:45 p.m.	College of Business
Monday	7:00 a.m.-Midnight	Computing Center RJE
Tuesday-Saturday	7:00 a.m.-Open 24 hrs/day	Computing Center RJE
Monday-Thursday	7:30 a.m.-Midnight 8:15 a.m.-11:45 p.m. 8 a.m.-Midnight	ISB 110 Terminal Area College of Business GAB 550C

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Friday	7:30 a.m.-6 p.m. 8:15 a.m.-7:45 p.m. 8 a.m.-8 p.m.	ISB 110 Terminal Area College of Business GAB 550C
Saturday	9 a.m.-6 p.m. 10 a.m.-8 p.m. CLOSE Midnight	ISB 110 Terminal Area GAB 550C Computing Center RJE

*EXCEPTIONS for GAB 550C: 11/27 12/20 - 8 a.m.-5 p.m.; 12/16-19 - 8 a.m.-10 p.m.; 11/29 - 10 a.m.-6 p.m.; 11/28,30 12/21 - CLOSED

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TCOM Computing Expands

By Scott Barber, Academic Computing Staff (AC10 @ NTSMUSIC)

Recently, there have been significant strides in the development of expanded computing services for the Texas College of Osteopathic Medicine (TCOM) in Ft. Worth. Negotiations have been taking place to develop a long-range plan to increase access to NT mainframes by TCOM faculty, staff, and students. It is expected that these efforts will soon result in the approval by the Regents of a new Interagency Agreement which would outline this long range vision and provide the financial framework for its implementation.

The proposal includes provision for a number of new positions for support of TCOM administrative and academic functions to be paid for by both campuses. New staff will be housed both at NTSU and TCOM to maximize coordination of efforts. The plan also involves a major upgrade of the NAS/6650 computer at NTSU, as the administration at NTSU and TCOM will both make heavy use of it.

In addition to administrative computing support, plans provide for a "needs assessment" to examine and identify academic computing needs for such areas as research, instructional support, and word processing. Data communications between NTSU and TCOM are also scheduled for improvement. Testing of a microwave communication system is currently underway which, if all goes well, should pave the way for a microwave link between the campuses sometime in the fall of 1986.

Of immediate value is the recent distribution of 10 Tandy 1200 HD microcomputers and printers to 10 different academic departments. The TCOM Computing Council allocated the PCs to those departments judged to be most desperately in need of a PC for departmental word processing. Judgment of said "desperation" was aided by a survey conducted by the NTSU Computing Center. Acquisition of more microcomputers for departmental use will likely occur after the results of the campus-wide needs assessment are obtained.

NTSU Becomes a BITNET Site

By Steve Glick, Technical Support Staff (MAINTVM @ NTSUVM1)

What is BITNET?

The Computing Center is proud to announce our affiliation with BITNET, an inter-university computer network. Users of BITNET have access to many facilities, including electronic mail and the ability to transfer programs and documents.

BITNET is a network linking more than 600 computers at about 300 institutions and research centers, including over 100 in Europe, Canada, and the Far East. BITNET also has 'gateways' (an interface from one type of network to another) to networks such as the Defense Advanced Research Projects Agency (ARPANET); CSNET, a network of over 150 computer science research departments; MAILNET, EDUCOM's inter-institutional mail system; and UUCP, a UNIX-based dial-up network with over 1500 nodes world wide, bringing the total number of sites into the thousands.

How does it work?

As mentioned above, BITNET is a cooperative network of educational institutions. It is an implementation of the IBM program product RSCS (Remote Spooling Communications Subsystem). RSCS is a 'Store-and-Forward' network. This means that a file which leaves NTSU is forwarded to the next node on the network. When the next node successfully receives the file, it notifies the sending node, and the sending node (more about nodes in a bit) discards its copy of the file. This process may be better understood with the following abbreviated topological map of the network:

(NTSU)---(UT Dallas)---(UT Austin)---(A&M)---(U/Houston)---(RICE)

Each university listed above represents at least one 'Node' on BITNET. Each node has a name. For example, NTSU currently has two nodes, NTSUVM1 and NTSMUSIC. NTSUVM1 is the node which CMS users have access to, and NTSMUSIC is the node which MUSIC users would use. Now, say that a need exists to send a file to a user at Rice University. I first have to know the node name by which Rice University is known (it is, in this case RICE, but they are not always so obvious.) Next, I need to know the recipients User-ID at RICE. Let us say the receiver's ID is BOB. From the MUSIC/SP memo facility, I would type:

MEMO SEND TO(BOB(RICE))

The file would leave NTSU and first go to UT-Dallas. When UTD receives the file, it sends an acknowledgment to us, and our RSCS system purges its copy of the file (Store and Forward). The process continues until the Rice RSCS system receives the file. When RICE receives the file, it forwards it to the appropriate user. If a user at Rice wished to send a file to a person whose Music ID is FZ92, they would send the file to FZ92 @ NTSMUSIC. This 'user_id @ node' is standard notation with respect to RSCS. The file would show up as a MEMO in FZ92's mailbox. The time required to send a file depends on network traffic, the size of the file, and the distance from sending to receiving node. Transfer of a 200-300 line file would take something on the order of a minute to reach Houston, depending on other network traffic. Sending the same file to New York might take 5 or 6 minutes.

How Can I get a list of BITNET sites?

A public file exists on MUSIC, called BITNET.USERS. This file can be listed at your terminal, edited (you could use the LOCATE command to find a university name), or printed with the PTPCH utility. If you have a need to communicate with a user at a member site, you would first make sure that the person with whom you wish to correspond has access to BITNET at their University. This being the case, contact the Computing Center to obtain access, via the MEMO facility, to BITNET. The receiver of your correspondence must provide you with both a Node Name and a User Id. You must provide them with your MUSIC or CMS ID, and our Node Name (which is NTSMUSIC if using MUSIC, or NTSUVM1 if you are a CMS user.)

Who can use BITNET?

Access to BITNET will be granted to any faculty member or graduate student having a legitimate need to communicate with another site. If you have a CMS ID, you already have access to BITNET. Although BITNET is designed primarily to operate with the CMS operating system, transfer of mail or documents is also supported here through MUSIC/SP. If you are a MUSIC user, contact the Manager of Academic Computing at 565-2324 to apply for BITNET access. Pending the acquisition of funding for additional VAX Software, VAX users will have limited access to the network.

This is pretty slick, but how much does it cost?

As mentioned above, BITNET is a cooperative network. In the present context, this means that use of it is free. The Computing Center at NTSU pays for a 9600 baud link to UT Dallas. UT Dallas pays for the link to UT Austin, which pays for the link to A&M, etc. All use of BITNET, though, is explicitly limited to the exchange of non-commercial information in support of our mission of education and research. Commercial use of BITNET is strictly forbidden.

BITNET represents a significant addition to the facilities which are offered here. For example, a physicist here at NTSU now has a fast, and economical (free) link to the *Centre Europeene Recherche Nucleaire* (CERN) in Europe. A CERN scientist and one here who are jointly working on research could exchange notes or a co-authored paper. Or a social scientist could exchange data or a joint paper with a colleague at, say, Duke University. We at the Computing Center have already used BITNET in documenting and fixing a bug in MUSIC via transfer of data to the MUSIC/SP development staff in Canada. If you have any questions about BITNET, contact the Computing Center at 565-2324.

NOTE: The reference for RSCS (and thus BITNET) communication in this article is the *CMS Primer* (SC-24-5236) which is available at the University Store. This reference will help CMS users only, and the relevant info is in Chapter 5 'Communicating With Other People (Who Use Computers)'.

MS-DOS Utilities for the TI and IBM PCs

By Scott Barber, Academic Computing Staff (AC10 @ NTSMUSIC)

The Computing Center has recently acquired a number of public domain utilities for TPCs and IBM PCs and compatibles. These include library utilities, programs for "squeezing" and "unsqueezing" files for more efficient phone line transfer, displaying the value of the internal system clock continually, converting .COM files to .BAS and back (for data transfer), and more!

One program that may be of particular interest is a program to strip the "high" bits off of some characters in files created by WordStar. This enables the transfer of files created by WordStar over standard data communications links. Thus, you can send your WordStar document over phone lines or through the Local Area Network (LAN) to the mainframes at NTSU for storage or processing by a mainframe text processor such as Waterloo/SCRIPT.

If you are interested in these utilities, please bring an MS-DOS formatted diskette to the Computing Center. If you are searching for a program for TPCs or IBM and compatible PCs, let us know and we will keep our collective eyes and ears open.

Additional Print Environments Available on the Laser Printer

Two additional print environments have been added to the laser printer. They have the same characteristics as the "standard" print environment except that the print is compressed. They can be called by placing either LP2X or LP4X in the appropriate position in the SYSPRINT DD card in your JCL. In the LP2X environment, the X may be replaced with a number from 1 to 4 to produce the corresponding number of copies within the printout (the default is one copy).

LP stands for logical page, and it means that either two or four "logical pages" are printed on one physical page, depending on the environment chosen. These would be good environments to use if you have a lot of output and it doesn't need to be especially large print (like something you might keep as a reference). It should be noted that the LP4X environment can only be used to print out documents with a lot of white space in them. If there is too much material to print, the laser printer will run out of memory. **DO NOT USE THIS TO PRINT DUMPS!**

Character Representation: More Confusing Facts

By Claudia Lynch, Benchmarks Editor (AS04 @ NTSMUSIC)

The September *Benchmarks* contained an article about character representation and how it may differ depending on whether a file is created using the MUSIC/SP line editor (used when CALLED to 8040) or the full screen editor (used when CALLED to 3270). You may remember that the ASCII code sent from the terminal must be translated by the software (operating system) into EBCDIC, so that the NAS/8043 can understand it. Thus, although your terminal generates ASCII characters, the computer sees them as EBCDIC, and even if you cause the hexadecimal representation of the characters you type on the screen to be displayed, you will always see EBCDIC, because the software has already translated them.

When you **CALL 8040** you are going directly to the NAS/8043, but when you **CALL 3270** you are going through the protocol converter before you get to the 8043. In this case, the protocol converter translates the ASCII characters into EBCDIC instead of the software, and in certain cases, they are translated differently.

So far we have been dealing only with *on-screen* character representation. When we add another level of complexity, the laser printer, we may get even different results. The following tables list special characters and how they would appear on a printout from the laser printer, depending on what was used to create the file (the line editor or the full screen editor) and the print environment selected. If a field is left blank, that means that the character appears on the printout as it did when typed on the screen.

It is very important for you to remember that if you create a file while CALLED to 3270, these characters may look different if you decide to edit it when CALLED to 8040 (and vice versa). As long as you aren't editing, you can submit files for printing that were created while using either the line editor or the full screen editor and get results corresponding to what you would get if your file was submitted from the location it was created. The key phrase here is, **BE CAREFUL!**

SPECIAL CHARACTER OUTPUT FROM FILES GENERATED ON "3270"

Character (Graphic)	PI01 Print Train	EL01 Print Train	SC01 Print Train	HA01 Print Train	DC01 Print Train	PN01 Print Train	TNS1 Print Train	TN01 Print Train	Standard Print Train	LP2X, LP4X Trains
[							¢	¢		
!	]	]	]	]	]	]			]	]
]	!	!	!	!	!	]			!	]
^						]	]	]		
/										
							°	°		
~										
,							■			
{										
}										
\	/	/	/	/	/	/	/	/	/	/

SPECIAL CHARACTER OUTPUT FROM FILES GENERATED ON "8040"

Character (Graphic)	PI01 Print Train	EL01 Print Train	SC01 Print Train	HA01 Print Train	DC01 Print Train	PN01 Print Train	TNS1 Print Train	TN01 Print Train	Standard Print Train	LP2X, LP4X Trains
[	U					U			U	U
!	l					l			l	l
]	e	!	!	!	!	e			e	e
^	!					!	]	]	!	!
/	l	l	■	l	l	]	]	]	l	l
	^					l	l	l	^	^
~	9					9	9	9	9	9
,	B					B	B	B	B	B
{	,					,	,	,	,	,
}	[	/	/	/	/	[	¢	¢	[	[
\										

If you don't know what print environment you have been using and you have been submitting Waterloo/SCRIPT jobs, your print environment has probably been TN01 (the default). If you have been running SPSS-X, SAS, COBOL, or some other programming language jobs, your print environment has most likely been "standard".

Legend of Special Characters:

[	Opening Bracket	:	Vertical Line
!	Exclamation Point	]	Closing Bracket
^	Circumflex	~	Tilde
	Vertical Bar; Logical OR	,	Grave Accent
{	Opening Brace	}	Closing Brace
\	Reverse Slant	/	Slash

Computing Council Representatives, Fiscal Year 1985-1986

The University Computing Council was established in 1981 to function as an advisory body with respect to computing policies, services, physical facilities, and allocation of resources. It is a standing Council, and reports to a Steering Committee composed of the Vice President for Fiscal Affairs, the Vice President for Academic Affairs, the Vice President for Administrative Affairs, and a Representative of the President of the Texas College of Osteopathic Medicine.

The Computing Council is concerned with both current policy matters and long-range planning. An emphasis is placed on policies and procedures to provide and maintain a balance between required computing services and the necessary funding, staff, and space commitments to meet these requirements. The equitable allocation of existing computing services is also of continuing concern.

Academic, administrative, and Computing Center representatives comprise the Computing Council, with the academic representatives serving the dual role of Council members and Academic Computing Coordinators for their respective colleges or schools. The duties of the Academic Computing Coordinators are listed below:

- * Developing, documenting, and updating school or college and departmental computing plans including current and future computing service requirements by course or project. These plans are then used by the Council to determine and document University academic computing requirements.
- * Providing advice and assistance to faculty members in the use of computing services and software packages to promote effective and coordinated use of available computing services and facilities.
- * Providing advice and assistance to the Computing Center staff in the development of user guides, software documentation, and seminars.
- * Coordinating, assisting, and controlling departmental or faculty sub-allocations of resources such as terminal and on-line disk storage.
- * Coordinating, assisting, and controlling departmental or faculty acquisition of computing equipment and software (including microcomputers and word processing systems).
- * Other duties as agreed within the Computing Council.

The administrative computing representatives are individuals who, because of their positions, are normally responsible for the development and coordination of major administrative computing information systems. Other members of the Council include representatives from the Computer Science Department and the Business Computer and Information Systems Department; The Director of Computer Systems, the Manager of Computing Services, the Manager of Academic Computing, the Manager of Information Systems (all non-voting, ex-officio members); and several additional members who have expertise otherwise not available on the Council.

It is particularly important that all members of the academic community be aware of their particular representative on the Council, so that any requests or questions that would be appropriate for the Council to consider can be heard.

Following is a list (as of October 1985) of all Computing Council members:

ACADEMIC COMPUTING COORDINATORS

	Expiration of Term
Dr. Neal Tate, Chair, College of Arts and Sciences	1986
Mr. Cengiz Capan, College of Business Administration	1985
Dr. William Luker, School of Community Service	1986
Dr. Robert Bane, College of Education	1987
Dr. Rose Mary Magrill, School of Library and Information Sciences	1989
Dr. Paul Dworak, School of Music	1987
Dr. Gerald Knezek, Department of Computer Sciences	1985
Dr. Michael Gibson, Business Computer Information Systems - COB	1987
Ms. Fern Motheral, TCOM, Computer Services	1985
Dr. Jane Workman, Home Economics	1987

ADMINISTRATIVE COMPUTING COORDINATORS

Academic Affairs Systems

Ms. Joneel Harris, Registrar	1987
Mr. Tom Overton, Counseling and Testing	1986
Dr. Jimmie Naugher, Office of Planning and Analysis	1987
Dr. Ed Johnson, Director of Libraries	1985
Dr. Peter Witt, Research Office/ Graduate School	1985

Fiscal Affairs Systems

Mr. Steve Rohn, Controller	1986
Mr. Larry Hoke, Purchasing	1986

Administrative Affairs and Other Systems

Mr. Steve Miller, Personnel	1986
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Medical Affairs Systems

Mr. Steven R. Russell, Business Manager, TCOM Administrative Services	1985
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OTHER REPRESENTATIVES (Non-Voting)

Mr. Richard Harris, Associate Vice President for Computing - Computing Center
 Dr. Tom Madron, Manager of Computer Services - Computing Center
 Mr. Coy Hoggard, Manager of Information Systems - Computing Center
 Dr. Bob Brookshire, Manager of Academic Computing - Computing Center
 Mr. Stan Sawyer, Systems Analyst - Computing Center
 Ms. Gwen Wells, Office Automation Analyst - Computing Center
 Dr. Larry Luce, Director of Facilities Planning & Utilization
 Mr. Ray McFarlane, Director of Facilities Planning & Utilization
 Mr. Tom Newell, Communications Manager

The Computing Council has the following standing committees: Planning and Needs Assessment, Chair: Neal Tate; Central Computing Resource Allocation Priorities, Chair: Jimmie Nauger; Academic Software Priorities, Chair: Michael Gibson; Microcomputer/Office Automation, Chair: Steve Rohn; User Friendly Committee, Chair: Bill Luker.

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*          O P E R A T I O N S      *
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Disk Backup Schedules

Backup Schedule for OS/MVS

OS/MVS disk packs (academic and administrative) are backed up daily, Tuesday through Saturday, from 4-6:30 a.m., and Sunday from Midnight to 3 a.m. A backup of all the operating systems on the NAS machines and their contents is done once every two weeks at some low activity period over a weekend.

MUSIC Backup Hours

A message will be sent to all users signed on to MUSIC approximately 10 minutes before backups are begun. It will be in the form * * MUSIC SHUT DOWN AT xxxx AM - SCHEDULED BACKUP *. To find out the backup hours while signed on to MUSIC, enter HELP HOURS. The following backup schedule is currently in effect:

Tuesday	3 a.m. (for about 3 hours)	Weekly backup
Wednesday - Saturday, Sunday	4 a.m. (for about 2 hours)	Daily backup
Saturday	Midnight (for about 2 hours)	Daily backup

VAX Backup Schedule

Incremental backups of both VAX systems are performed Monday through Thursday at 4 p.m. Users do not have to log-off, but any files that are open at the time of the backup will NOT be backed up.

Full backups of both systems are done every Friday beginning at 8 a.m. These generally will take all day to complete. Again, users do not have to log-off, but any files that are open will not be backed up.

A "Stand Alone" backup of the system disk is done the third Tuesday of every month, in the afternoon, just before preventive maintenance. This procedure makes a copy of the system disk that can be used to restore its contents if the disk is completely destroyed. The system will be shut down; watch the system log-on message for specific times and dates.

NOTE: No backups are taken on the weekends. Requests for restoration of files should be made via MAIL to the username OPERATOR. Your file can only be restored if it existed before the last backup was done.

NAS/8043 and NAS/6650 Performance Statistics for October

CPU	SYSTEM	SCHEDULED OPERATING HOURS	PLANNED MAINT. HOURS	PLANNED PRODUCTION HOURS	UNPLANNED MAINT. HOURS	PRODUCTION HOURS ACHIEVED	SYSTEM UPTIME
8043	VM/SP3	744	0.12	743.88	1.90	741.98	99.7%
8043	MUSIC	744	21.27	722.73	6.25	716.48	99.1%
8043	MVS/JES2	744	0.62	743.38	5.07	738.31	99.3%
8043	COMPLETA	744	0.65	743.35	6.84	736.51	99.1%
6650	MVS/JES2	744	0.53	743.47	2.90	740.57	99.6%
6650	COMPLETEA	336	0.00	336.00	1.55	334.45	99.5%
6650	ADABASA	744	18.21	725.79	5.78	720.01	99.2%

System Uptime = (Production Hrs. Achieved)/(Planned Production Hrs.)

Production Hrs. Achieved = (Planned Production)-(Unplanned Maint.)

Scheduled Operating Hrs. = (Planned Maint.) + (Planned Production)

MUSIC Planned Maintenance Hours include 20.50 Hrs. for system backup.

ADABASA'S Planned Maintenance Hours include 17.63 Hrs. for system backup.

The NAS/8043 CPU achieved 100% uptime. The NAS/7360 DASD achieved 100% uptime.

The NAS/7350 DASD achieved 100% uptime. The NAS/6650 CPU achieved 100% uptime.

The STC 8650 DASD achieved 100% uptime.

Lost productivity is calculated as the greatest amount of elapsed time that any one of the production systems was unavailable for scheduled operation. Lost productivity hours were contributed to by the following key causes:

NAS/8043 CPU:

Miscellaneous

1. Re-IPL to set CPU clock to Standard Time	0.77
2. MUSIC/SP System Failures	5.20
3. MVS/JES2 System Tuning/Improvements	0.87
4. COMPLETA System Failures	0.59
5. COMPLETA System Tuning/Improvements	0.26
6. Equipment Power Down to correct By-pass Switching Failure with the UPS System	1.70
GRAND TOTAL FOR NAS/8043	9.39 HOURS

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NAS/6650 CPU:

ISB Input/Output Station (IBM)

1. MVS/SP Lock-Up after CIA Cards were Replaced in the 2821 I/O Controller on Channel 0	0.68 HOURS
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Miscellaneous

1. Re-IPL to set CPU clock to standard time	0.58
2. ADABASA System Tuning/Improvements	0.52
3. ADABASA System Failures	1.22
4. COMPLETA System Failures	0.50
5. Equipment Power Down to correct By-Pass Switching Failure with the UPS System	2.28
6. Power Failure in ISB on I/O Equipment caused BYMPX Channel 0 to Fail	0.58
TOTAL	5.64 HOURS
GRAND TOTAL FOR NAS/6650	6.36 HOURS

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NAS/8043 Program Hit Parade

The following programs were used the most frequently on the NAS/8043 during the month of October.

TOP TEN PROGRAMS IN TERMS OF FREQUENCY OF RUNS

<u>Program</u>	<u>Description</u>	<u>Number of Runs</u>
1. PGM = *.DD	Compiled Program	22,625
2. IEWL	Linkage Editor	22,202
3. IKFCBL00	VS COBOL Compiler	17,743
4. SCRIPT	Waterloo/SCRIPT	9,574
5. IEBGENER	IBM Utility	9,515
6. IFOX00	System Assembler	7,059
7. PTPCH	Dataset Lister	5,113
8. SASLPA	SAS	4,538
9. IEFBR14	IBM Null Utility	3,661
10. IEBPTPCH	IBM List Utility	1,841

TOP TEN PROGRAMS IN TERMS OF CPU SECONDS USED

<u>Program</u>	<u>Description</u>	<u>CPU Seconds</u>
1. PGM = *.DD	Compiled Program	49,043
2. IKFCBL00	COBOL Compiler	28,355
3. SASLPA	SAS	27,975
4. IFOX00	System Assembler	22,874
5. SCRIPT	Waterloo/SCRIPT	18,069
6. PTPCH	Dataset Lister	10,700
7. IEWL	Linkage Editor	8,991
8. IEBGENER	IBM Utility	2,444
9. DAG01	User Program	2,422
10. SPSS	SPSS-X	1,589

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*               *
*             V A X E N             *
*               *
* * * * *

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BMDP for the VAX!

By Scott Barber, Academic Computing Staff (AC10 @NTSMUSIC)

We now have a version of BMDP, a widely used statistical package, for the VAX systems at NTSU. There are two major advantages associated with this acquisition. The first is that users of the VAX systems will now have the ability to conduct statistical analyses with a fairly popular and powerful set of statistical routines not previously available for those machines. Up to this point, users have had to use the NAS/8043 for such purposes.

The second advantage has to do with the fact that BMDP can run interactively on the VAX. While there are other packages which will run interactively under MUSIC and VMS (Minitab and Statpak), BMDP is much more powerful. For example, with BMDP, you can utilize clustering analytic techniques, discriminant analyses, multivariate analysis of variance and covariance, with repeated measures, Box-Jenkins time series analysis, etc.

The general form of the command to invoke BMDP is the following:

BMDP "program_name" in="input_file" out="output_file"

from the \$ prompt. If you exclude the "in" and "out" parameters, you will be prompted for these files.

You can get on-line help for running BMDP by entering:

\$ BMDP <CR>

You may get further assistance by contacting the consultants in the Computing Center at 565-2324.

Line Availability Increased

By Lee Harper, Vax Operator

There are now more terminal lines available for users on the VAX Machines. You can now call the following addresses to access your respective VAX:

Vax A — addresses A780 - A78F

Vax B — addresses B780 - B78E

As a rule, you will normally have to call only A780 or B780 depending on your machine. If you get a 'no response from unit' message when calling the base address (A780 or B780), however, then try issuing calls to higher address numbers. One bad PCU can interrupt the series.

Top Ten Most Frequently Run Images on the VAXes

By Syed Zafar and Lee Harper, VAX Operators

VAX A

<u>Image name</u>	<u># of times run</u>
1. TYPE	13,723
2. LOGINOUT	12,133
3. DIRECTORY	10,235
4. EDT	9,314
5. DELETE	9,162
6. SET	6,993
7. PASCAL	4,110
8. SNITCH	3,837
9. SHOW	2,521
10. LINK	2,417

VAX B

<u>Image name</u>	<u># of times run</u>
1. LOGINOUT	6,217
2. TYPE	5,578
3. EDT	4,870
4. DIRECTORY	4,491
5. DELETE	4,341
6. SET	3,687
7. SNITCH	1,886
8. PASCAL	1,853
9. LINK	1,184
10. SHOW	873

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Benchmarks is a vital link between the NTSU Computing Center and the users of our facilities. It is important for all users of the computing facilities to maintain a file of these newsletters because they contain materials which will periodically update existing documents as well as information and suggestions on uses of OS/MVS, MUSIC, the VAX 11/780's, Microcomputers, and other resources available to NTSU students and faculty. To facilitate the dispersal of *Benchmarks*, *** **FREE** *** subscriptions are available. To receive yours, send the following information to us either by "snail mail" (the post office or campus mail) or electronically, through the MEMO facility on MUSIC to FA18.

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